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United States Court of Appeals
Tenth Circuit

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PATRICK FISHER
Clerk

PUBLISH

UNITED STATES COURT OF APPEALS

TENTH CIRCUIT

MARY KINSER, individually and as heir at law and personal representative of the estate of Tim Kinser, deceased, Plaintiff-Appellee, v. GEHL COMPANY, Defendant-Appellant.	No. 98-3152

APPEAL FROM UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF KANSAS
(D.C. No. 96-2361-EEO)

E. Wayne Taff, of Sherman, Taff & Bangert, P.C., Kansas City, Missouri (Alan Epstein, of Hall & Evans, Denver, Colorado, and Steven F. Coronado, of Sherman, Taff & Bangert, P.C., Kansas City, Missouri, with him on the brief), for the appellant.

Daniel F. Church, of McAnany, Van Cleave & Phillips, P.A., Lenexa, Kansas (Byron A. Bowles, of McAnany, Van Cleave & Phillips, P.A., Lenexa, Kansas, and Kenneth J. Eland, of Sloan & Eland, Hoxie, Kansas, with him on the brief), for the appellee.

Before **KELLY, McWILLIAMS,** and **BRISCOE**, Circuit Judges.

BRISCOE, Circuit Judge.

Defendant Gehl Company appeals from the district court's denial of its motion for judgment as a matter of law or, in the alternative, for new trial following a jury verdict in favor of plaintiff in this product liability lawsuit. We exercise jurisdiction pursuant to 28 U.S.C. § 1291 and affirm.

I.

Prior to his death, Tim Kinser operated a farm in Jennings, Kansas. On August 17, 1994, while baling alfalfa with his Gehl model 1870 big round baler, Kinser became entangled up to his waist in the compression rollers of the baler's feed intake unit. Farmhand Jeff Rhoades first arrived on the scene and, noting the tractor's engine was on and the power take-off (PTO) device, which transmits power from the tractor to the baler, was still engaged, turned off all machinery and attempted to assist Kinser in extricating himself from the baler. Unable to provide much help on his own, Rhoades obtained the assistance of fellow farmer George Gassman and the two used bumper jacks and an acetylene torch to free Kinser. Although an ambulance immediately transported Kinser to the Decatur County Hospital, he lost consciousness during the ride and was pronounced dead within thirty minutes of his arrival at the hospital.

In August 1996, plaintiff Mary Kinser, [1] on behalf of herself and her

[1]Unless stated otherwise, all references to Kinser in this memorandum are (continued...)

decedent husband's estate, filed the instant product liability diversity action against Gehl, alleging (1) strict liability for manufacturing and selling an unreasonably dangerous product, (2) negligent design and manufacture, and (3) breach of implied warranty by introducing into the stream of commerce an unreasonably dangerous product that was not fit for its intended purpose.

II.

Much of the trial revolved around the design evolution of big round balers. There are two types of such balers on the market: open-throat models and closed-throat models. An open-throat baler utilizes spring-loaded tines to pick up crops off the ground and feeds the material directly into a rotating bale chamber. A closed-throat baler, which was the design of the Gehl 1870 baler used by Kinser, employs a similar pick-up system but, before feeding the crops into the bale chamber, first passes them through a series of compression rollers. These compression rollers create a higher density bale by packing down the initial core of the bale. Once the bale in the chamber has reached the desired size, an automatic tying system is triggered. This mechanism, located on the front of the baler just above the feed intake area, activates an arm that swings twine across the bale in the chamber and cuts the twine when the bale is fully wrapped.

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[1](...continued)
to the decedent, Tim Kinser.

Big round balers were invented in the early 1970s, and Gehl began manufacturing the machines in 1974. In the first decade of the big round baler's existence, numerous manufacturers, including Gehl, built both open-throat and closed-throat models. By the mid-1980s, however, every American manufacturer other than Gehl, for reasons unspecified in the record, had shifted its production exclusively to open-throat balers. Since that time, Gehl has been the sole domestic manufacturer of closed-throat balers.

Gehl's closed-throat balers have undergone multiple design changes from the time they first were manufactured in 1974. The model 1870, which was designed in 1989 and initially sold the following year, is a third-generation machine. (Kinser's specific baler was manufactured on January 9, 1991, and was purchased by him from a licensed dealer on June 18, 1991.) Notwithstanding the general design evolution, numerous former and current Gehl executives observed that the feed intake area of the baler, with which we are concerned here, has remained essentially the same in all models.

Like all balers discussed in this case, the model 1870 is powered by a PTO and is operative only if the tractor is on, functioning at the same revolutions per minute as the tractor's engine. The only shut-off mechanism for the PTO and, hence, the baler, is located next to the driver's seat on the tractor.

Because of the many moving parts in the 1870 baler's feed intake and

assembly areas, Gehl has issued an array of warnings in its operator's manual and posted a series of warning decals on the machine itself detailing the proper handling of the baler. These warnings direct users to follow a "mandatory safety shutdown procedure" before unclogging, cleaning, adjusting, lubricating or servicing the unit. Under this procedure, users must (1) disengage the PTO, (2) shut off the tractor engine and remove the starter key, (3) wait for all movement to stop, and (4) remove all power connections, including the PTO device, from the tractor. It is undisputed that, had Kinser adhered to these instructions, he would not have been injured.

Despite this mandatory shutdown procedure, numerous farmers testified the nature of their work makes it impracticable to abide by the instructions. Farmers frequently work alone and often have only a small window of time in which to harvest crops at ideal climatic conditions. Several farmers noted that it is common for them to get off of their tractor with the PTO engaged to, *inter alia*, assess feeding problems and general mechanical malfunctions in the feed intake unit, and adjust the twine in the automatic tying mechanism. With respect to the tying mechanism, the twine often breaks or the catch fails to secure one or both of the twine strings. As a result, the twine eludes the cutoff device, leaving twine dangling in front of the baler. A farmer is then forced to sit or lie on the ground directly in front of the baler's pick-up assembly area and rethread the twine. Such

a position puts the operator under the PTO tongue and within several inches of the pick-up tines.

As there were no witnesses to the injury, it is unclear exactly how Kinser entangled himself in his baler's pick-up assembly area. Several individuals speculated Kinser was either attempting to unplug [2] the baler or fix the automatic tying mechanism. Plaintiff's expert, Dr. Jerry Purswell, theorized that, as either scenario would have put Kinser within inches of the pick-up tines, Kinser likely lost his footing and was pulled into the machine. Plaintiff's other expert, William Kennedy, echoed this testimony.

Plaintiff presented extensive evidence on the purported defects in the 1870 baler's design. There is no dispute the baler's feed intake area and compression roller design represent potential hazards. In fact, the Farm and Industrial Equipment Institute (FIEI), a trade organization comprised of farm and industrial equipment manufacturers, discussed these hazards at a series of meetings in 1977 and 1978. The FIEI's Big Round Baler Manufacturers' Safety Committee, of which former Gehl vice-president of engineering Donald Burrough was a member, identified entanglement in the feed intake/assembly area as a particular hazard that could lead to the loss of life and limbs and suggested such countermeasures

[2]A "plug" occurs when too much crop enters the baler too quickly and the compression rollers stop turning.

as additional shielding or the all-out elimination of compression rollers. During its six-year existence, the committee also discussed the operational difficulties and accident experiences of all big round baler manufacturers.

Dr. Purswell opined the 1870 baler was defectively designed. He claimed the FIEI's extensive analysis of feed entanglement injuries should have alerted Gehl to the likelihood of Kinser's injury. Purswell further observed the mere posting of warnings is ordinarily insufficient to make a product safe. He noted that under a proper "design hierarchy," warnings constitute an adequate response to a hazard only if the manufacturer is unable to either eliminate the hazard altogether or erect a guard to shield the hazard. Purswell suggested a number of ameliorative possibilities that could have greatly reduced the severity of Kinser's injuries, including the installation of an automatic shut-off mechanism (in the form of a lanyard or cable) on the front of the baler, movement of the pick-up tines further back along the bottom of the baler, movement of the hay holddown bar (i.e., wind guard) and/or elongation of the PTO tongue to minimize operators' potential proximity to the feed intake area, and construction of a guard in front of the pick-up tines. Purswell highlighted the feasibility of the guarding proposal by noting that John Deere previously had adopted similar modifications to its model 510 closed-throat baler.

Elaborating on Purswell's testimony, Kennedy referenced a guarding device

on Vermeer's model 504-C closed-throat baler, maintaining such a guard easily could have been adapted to the Gehl 1870 baler and could have prevented Kinser's death. Kennedy further underscored the importance of "human factors" in product safety design (how operators typically use the machinery). Based on his own discussions with farmers and review of FIEI documents, Kennedy insisted a prudent manufacturer would know farmers frequently step off their tractors and approach attached balers without first disengaging the PTO. He noted that while farmers recognize the potential for injury inherent in this procedure, they do not fully appreciate the magnitude of the risk involved. Kennedy then remarked that two prior accidents involving similar feed intake area injuries in Gehl-manufactured closed-throat balers—the *Birchler* and *Neill* cases—should have alerted the company to the need for design changes.

Plaintiff also adduced testimony that not only did Gehl fail to construct any guarding or shielding in front of the 1870 baler's feed intake area, but the company never even considered the baler's potential hazards in its in-house safety committee meetings. In response to plaintiff's request for documents regarding the safety review of the 1870 baler, Gehl produced a single sheet of paper with one line of text on it. Other than suggesting a product safety review was conducted on the 1870 baler in November 1989, the sheet of paper offers no insight whatsoever into what, if any, hazards the company identified in its design

of the baler.

According to Burrough, Gehl itself never investigated or studied the issue of human entanglement in closed-throat balers. Kim Viesselmann, Gehl's current project engineer in charge of big round balers, similarly testified he was unaware of any such studies. Viesselmann also noted Gehl has never considered placing a shield or guard in front of the feed intake area nor has it undertaken a "human factors" analysis to assess operator reactions to hazards or the efficacy of its warning instructions and decals. He suggested Gehl has not erected any shielding or guarding in front of the feed intake area because the company does not expect operators to be in that area with the PTO engaged. The testimony of Lance Henrickson, Gehl's product safety engineer, was largely to the same effect.

In its defense, Gehl challenged the qualifications of plaintiff's expert witnesses, offered testimony questioning the feasibility of plaintiff's proposed shielding/guarding designs, highlighted the dissimilarities in designs between the 1870 baler and other closed-throat balers employing various shielding/guarding devices, and suggested Kinser's own failure to recognize an open and obvious danger was the cause of his injuries. Gehl also presented its own expert witness, Dr. Bobby Clary, who holds a Ph.D. in agricultural engineering and has extensive experience in farming and agricultural equipment design. Based on his own review of the 1870 baler, combined with his farming experience and discussion

with other farmers, Clary opined that the machine was not dangerous beyond the expectations of farmers who use it.

Following a seven-day trial, the jury returned a verdict finding Gehl 55% at fault and Kinser 45% at fault and assessing $3,849,181 in damages. After making the requisite comparative fault and statutory cap reductions, the district court entered judgment in favor of plaintiff in the amount of $817,049.55. Gehl filed a post-trial motion for judgment as a matter of law, or, alternatively, for new trial. The district court denied the motion in a written order.

III.

Gehl contends plaintiff advanced insufficient evidence to support her product liability claims, thereby entitling the company to judgment as a matter of law. Gehl further contends the district court made a number of erroneous evidentiary rulings that entitle the company to a new trial.

Denial of Motion for Judgment as a Matter of Law

We review de novo the district court's denial of a litigant's motion for judgment as a matter of law filed pursuant to Fed. R. Civ. P. 50(b). Vining v. Enterprise Fin. Group, Inc., 148 F.3d 1206, 1213 (10th Cir. 1998). We will reverse such a ruling "only if the evidence points but one way and is susceptible to no reasonable inferences supporting the party opposing the motion." Id. (citation omitted). In our review, "we may not weigh the evidence, pass on the

credibility of witnesses, or substitute our judgment for that of the jury." Wolfgang v. Mid-America Motorsports, Inc., 111 F.3d 1515, 1522 (10th Cir. 1997). Further, we must construe all evidence and the inferences therefrom in the light most favorable to the non-moving party. Id.

Like the district court, we must evaluate the Rule 50(b) motion by looking at all evidence admitted at trial, even that which was admitted in error. Schudel v. General Elec. Co., 120 F.3d 991, 995 (9th Cir. 1997), cert. denied, 118 S. Ct. 1560 (1998); Jackson v. Pleasant Grove Health Care Ctr., 980 F.2d 692, 695-96 (11th Cir. 1993); Douglass v. Eaton Corp., 956 F.2d 1339, 1343-44 (6th Cir. 1992); Persinger v. Norfolk & W. Ry. Co., 920 F.2d 1185, 1188-89 (4th Cir. 1990); Sumitomo Bank v. Product Promotions, Inc., 717 F.2d 215, 218 (5th Cir. 1983); Midcontinent Broad. Co. v. North Cent. Airlines, Inc., 471 F.2d 357, 358-59 (8th Cir. 1973); contra Lightning Lube, Inc. v. Witco Corp., 4 F.3d 1153, 1199-1200 (3d Cir. 1993).

> This rule promotes certainty: litigants need not supplement conditionally admitted evidence, perhaps unnecessarily; and district courts need not speculate as to what other evidence might have been offered if the evidence had been excluded at trial. The rule promotes fairness: punishing a litigant for the court's erroneous admission of evidence is unfair; and the remedy of a new trial is available to put both sides on an equal footing.

Schudel, 120 F.3d at 995 (citing Jackson, 980 F.2d at 696 n.4).

1. Strict Liability

Kansas has adopted the strict liability doctrine set forth in Restatement (Second) of Torts § 402A (1964), and its accompanying comments. Jenkins v. Amchem Prods., Inc., 886 P.2d 869, 886 (Kan. 1994) (citing Brooks v. Dietz, 545 P.2d 1104, 1108 (Kan. 1976)). The Kansas pattern instruction on strict liability, which the Kansas Supreme Court has embraced, see id., and which the district court gave here, tracks the language of the restatement. See Pattern Instructions Kansas–Civil 128.17 (3d ed. 1997). The instruction provides:

> A manufacturer who sells a product in a defective condition which is *unreasonably dangerous* to the user is subject to liability for physical harm thereby caused to the ultimate user if:
>
> (1) The manufacturer is in the business of making such a product; and
>
> (2) It is expected that the product will reach and does reach the user without substantial change in the condition in which it is sold.
>
> This rule applies although the manufacturer has exercised all possible care in the preparation and sale of its product and although the manufacturer has not bought the property from or entered into any contractual relation directly with the manufacturer.
>
> *A product is in a defective condition if it has a defect in design, and such defect existed at the time the product left the manufacturer's hands.*
>
> *A defective condition is unreasonably dangerous if it is dangerous when used in the way it is ordinarily used considering the product's characteristics and common usage, and is dangerous to an extent beyond that which would be contemplated by the ordinary consumer who purchased it, with the ordinary knowledge common to the community as to its characteristics.*

Id. (emphasis added). [3]

Gehl insists its 1870 baler is not unreasonably dangerous because the evidence was undisputed that foreseeable users of the baler did not consider it more dangerous than expected "when used safely." We disagree. In evaluating whether a defective condition is unreasonably dangerous, the relevant inquiry focuses on the danger of the product when used in the way it is ordinarily used, not merely "when used safely." See Lester v. Magic Chef, Inc., 641 P.2d 353, 357-61 (Kan. 1982) (adopting the language of Restatement (Second) of Torts § 402A cmt. i). Foreseeable misuse of a product can give rise to a defective design claim. See Kan. Stat. Ann. § 60-3305. Although some farmers testified they never position themselves directly in front of the baler's feed intake area with the PTO engaged, not all did. A number remarked that the inherent time constraints in baling often compel them to diagnose general mechanical problems or adjust the automatic tying mechanism with the PTO still engaged.

Gehl next suggests plaintiff failed to prove the feasibility of an alternative design. Plaintiff advanced sufficient evidence of feasible alternative designs, however, by pointing out the guarding devices on the John Deere 510 and Vermeer 504-C closed throat balers, both of which were available at the time the

[3]The district court appropriately substituted the word "community" in the last sentence with "foreseeable class of users."

Gehl 1870 baler was first sold. In any event, Kansas law does not mandate such evidence as a prerequisite to recovery in a defective design product liability case. See Jenkins , 886 P.2d at 890 ("[E]vidence of a feasible alternative design is admissible in design defect cases, though it probably is not required."); Siruta v. Hesston Corp. , 659 P.2d 799, 808 (Kan. 1983) ("In products liability cases, the plaintiff in sustaining its burden to prove that a product is defectively designed may properly show the feasibility of a safer design."). Like many other states, Kansas law holds that a feasible alternative design is merely one factor a jury may consider in determining whether a product is defective. See Potter v. Chicago Pneumatic Tool Co. , 694 A.2d 1319, 1331-33 & n.11 (Conn. 1997) (cataloguing cases on the four approaches courts have taken on this issue).

Gehl further contends it is entitled to judgment as a matter of law because Purswell and Kennedy were unqualified to render expert opinions on the design of the 1870 baler. We reject this argument. The qualification of an expert witness is a preliminary question of law, Fed. R. Evid. 104(a), which, assuming an objection has been registered, the district court must assess as part of its gatekeeping function prior to admitting to the testimony. See Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 592-93 (1993). Notwithstanding Gehl's pre-trial motion *in limine* , the court refused to conduct a Daubert hearing in order to evaluate the

reliability of plaintiff's experts and the relevance of their proposed testimony.[4] Kinser v. Gehl Co., 989 F. Supp. 1144, 1147 (D. Kan. 1997). The remedy for this error, however, is, at best, a new trial. As noted above, we must analyze the denial of a motion for judgment as a matter of law by looking at all evidence admitted at trial, including evidence that should have been excluded. Schudel, 120 F.3d at 995. Looking at all evidence admitted at trial, we conclude the record supports a finding of defective design strict liability.

2. Negligence

The record also is sufficient to support the jury's verdict on a negligence-based theory.

> [T]he characteristic that distinguishes strict liability from negligence is proof of actual or constructive knowledge of risk: In a negligence action we focus on the defendant's conduct and require plaintiff to show defendant acted unreasonably in light of a known or constructively known risk. In strict liability actions, on the other hand, we focus not on the reasonableness of a defendant's conduct but on the product, and we either ignore the question of a manufacturer's actual or constructive knowledge of risk (as in a 'consumer expectations' design defect case) or we in effect impute to the manufacturer defendant current scientific knowledge of the risk caused by his product (as in a risk/benefit design defect balancing test).

Johnson v. American Cyanamid Co., 718 P.2d 1318, 1324 (Kan. 1986) (citation

[4]As noted in our discussion of Gehl's new trial request, the district court's error was entirely understandable in light of our then-controlling precedent in Compton v. Subaru of Am., Inc., 82 F.3d 1513 (10th Cir. 1996).

omitted).

A manufacturer has a duty to use ordinary care in the design of a product so that the product will be reasonably safe for the use for which it is intended or which can reasonably be anticipated. Garst v. General Motors Corp. , 484 P.2d 47, 60 (Kan. 1971); Pattern Instructions Kansas–Civil 128.02 (3d ed. 1997). A number of factors are considered in assessing whether a manufacturer has employed the requisite amount of due care, including (1) whether others in the field are using the same design or a safer design, (2) whether a safer design not yet in use is known to be feasible, and (3) whether, in the case of a new product, adequate testing has been conducted. Garst , 484 P.2d at 61. Although a manufacturer has an obligation to exercise reasonable care in product design, the manufacturer is not an insurer that its product is accident-proof or incapable of producing injury. Id. Nor is the manufacturer required to adopt only those features that "represent the ultimate in safety or design." Id.

To prevail on a defective design negligence claim, a plaintiff must establish that there was a defect in the product and not simply that a better design might have been possible. Id.

> To prove defective design, it is insufficient merely to assert that a different design would have alleviated or averted the plaintiff's injuries, since it may be assumed that any particular accident involving man and machine might have been avoided through a variation in the design of the machine. [Moreover,] such a variation might greatly magnify the chances of other sorts of mishaps taking place, or else

> render the machine incapable of reasonably efficient performance of its function.

Id. at 61 (quotation omitted). Evaluation of such a negligence claim entails a risk-utility analysis in which the inherent risks associated with the product are balanced against the product's utility and the burden necessary to eliminate or reduce the risk. Patton v. Hutchinson Wil-Rich Mfg. Co., 861 P.2d 1299, 1310 (Kan. 1993) (citing Restatement (Second) of Torts §§ 291-293 (1964)). The inquiry into defectiveness is confined to the time of sale. Id. at 1307. Kansas law imposes no duty to recall or retrofit a product not defective at the time of sale:

> If a product is not defective when it is first sold, it does not thereafter become defective by reason of technological improvements or other knowledge gained by the manufacturer. Foreseeability is the litmus test of whether a manufacturer is liable for a product that is defective when it is first sold.

Id.

In addition to the evidence outlined in our discussion of plaintiff's strict liability claim, there was testimony suggesting Gehl largely ignored the 1870 baler's potential hazards in its product safety reviews. Gehl appears to have conducted little or no investigation into the issue of human entanglement in the baler's feed intake area. Despite the fact that other manufacturers had erected shielding and/or guarding around the pick-up assembly areas of their closed-throat balers, Gehl never even considered installing such devices, thereby ignoring proper design hierarchy. Although Gehl executives were aware of human

entanglement injuries, the company apparently decided such injuries were attributable to operator negligence and did not necessitate design changes. In sum, there was ample evidence to establish negligence on the part of Gehl.[5]

Denial of Motion for New Trial

Reiterating many of the same points raised in its post-trial motion, Gehl contends it is entitled to a new trial because the district court erred in (1) permitting Purswell and Kennedy to testify as expert witnesses, notwithstanding their alleged lack of qualifications, (2) instructing the jury on a manufacturer's duty to test for defects, (3) admitting evidence of the *Birchler* accident, (4) allowing Purswell and Kennedy to rely on and reference documents purportedly from the FIEI, and (5) admitting Burrough's deposition excerpts.

1. Qualifications of Plaintiff's Expert Witnesses

Prior to trial, Gehl challenged the qualifications of plaintiff's expert witnesses and requested a Daubert hearing at which the court could assess the relevance and reliability of the experts' proposed testimony. Relying on our then-controlling precedent in Compton v. Subaru of Am., Inc., 82 F.3d 1513 (10th Cir. 1996), the district court denied the request, holding that a Daubert analysis was

[5]Gehl has not specifically addressed the implied warranty theory in its brief. For largely the same reasons outlined in our discussion of plaintiff's remaining theories, we believe the evidence was sufficient to support recovery under an implied warranty theory.

unnecessary inasmuch as "the testimony and opinions of Kennedy and Purswell are based solely on engineering background and experience, and not upon a particular methodology or technique." Kinser, 989 F. Supp. at 1147. In a single sentence, the court then stated plaintiff's experts' proposed testimony satisfied the "traditional Rule 702 inquiry." Id.

In Daubert, the Supreme Court held district judges must act as gatekeepers in admitting expert testimony, thereby ensuring that such evidence is both relevant and reliable. Daubert, 509 U.S. at 589.

> Unlike an ordinary witness, an expert is permitted wide latitude to offer opinions, including those that are not based on firsthand knowledge or observation. Presumably, this relaxation of the usual requirement of firsthand knowledge—a rule which represents a most pervasive manifestation of the common law insistence upon the most reliable sources of information—is premised on an assumption that the expert's opinion will have a reliable basis in the knowledge and experience of his discipline.

Id. at 592 (internal citations omitted). Although we interpreted Daubert to be limited to expert testimony grounded in some scientific principle or methodology, see Compton, 82 F.3d at 1518-19, the Supreme Court recently rejected that interpretation in Kumho Tire Co. v. Carmichael, 119 S. Ct. 1167, 1170 (1999). The Court held that while the factors identified in Daubert are flexible and non-exclusive, the testimony of all experts whose data, principles, methods, or application are called into question must be assessed for relevance and reliability as a precondition to admissibility. Id. at 1175.

Because the district court did not hold a Daubert hearing or make any findings on the qualifications of plaintiff's experts, our review is difficult. If the court had conducted a Daubert analysis, we would examine its admissibility ruling under an abuse of discretion standard. See General Elec. Co. v. Joiner, 118 S. Ct. 512, 519 (1997). Here we have no findings to review. Confronting a nearly identical situation, the Fifth Circuit recently implied a trial court's omission may be harmless error if the record contains sufficient indicia of the experts' qualifications. See Tanner v. Westbrook, 174 F.3d 542 (5th Cir. 1999). The Fifth Circuit essentially undertook its own Daubert analysis based on the materials submitted by both sides in regards to the defendant's motion for a Rule 104(a) hearing. Id. at 545-46. While this approach is generally reasonable, we do not think it necessary to confine our review to the materials accompanying the Daubert hearing request. Rather, we believe we may look at the entire record, including testimony presented at trial.

Purswell has a bachelor's degree in mechanical engineering, a doctorate in industrial engineering, and has taught classes on "product design from an ergonomics standpoint" (i.e., how individuals interact with products). He has consulted for agricultural manufacturers in litigation on numerous occasions, analyzing the adequacy of instructions, warnings, and guarding on certain farm equipment. He also has published articles suggesting product warnings are

limited in their ability to influence individuals to operate products safely.

These credentials alone do not qualify Purswell to testify as an expert in this case on possible alternative designs. Indeed, Purswell acknowledged he has no practical experience in mechanical design. He focuses solely on concepts and has no expertise with respect to the design of products under a traditional engineering method. He has never published a single paper examining any type of agricultural equipment, never operated a big round baler, and, excluding this case, never consulted on behalf of a plaintiff or manufacturer regarding big round balers. In fact, other than familiarizing himself with the deposition testimony of three farmers, Purswell has neither investigated nor spoken with any individual regarding their experience with big round balers.

Furthermore, Purswell admitted there is a well-recognized methodology which engineers in the field of product design must follow before recommending a design for a particular piece of equipment. To propose a design concept or design change without engaging in each of the steps of this methodology contravenes the engineering code of ethics. Purswell conceded his recommended changes for the 1870 baler were all mere concepts; he neither developed designs nor tested the feasibility or safety of any of his proposals.

As for Kennedy, he has a bachelor's degree in mechanical engineering and now works as a "forensic engineer" at his own consulting firm focusing on

product and vehicle accident reconstruction. He did not attempt to reconstruct Kinser's injury. In preparation for his testimony, Kennedy reviewed the depositions of several farmers, traveled to western Kansas to take measurements of and watch Kinser's (repaired) 1870 baler in use, and examined both industry standards publications and various big round baler manufacturers' operator's manuals. Kennedy acknowledged, however, that he has never designed a piece of agricultural equipment or operated a hay baler. After embracing Purswell's testimony regarding the necessity of following a strict engineering methodology before proposing design solutions to a manufacturer, Kennedy also conceded he had not adhered to that methodology before testifying on possible design changes for the 1870 baler. He merely reviewed the production run of similar guarding utilized by John Deere.

A number of circuits have suggested the testing of alternative design proposals is often a critical component to the reliability of an engineer expert witness' testimony on this subject. See Dancy v. Hyster Co., 127 F.3d 649, 651-52 (8th Cir. 1997); Watkins v. Telsmith, Inc., 121 F.3d 984, 989-90 (5th Cir. 1997); Peitzmeier v. Hennessy Indus., Inc., 97 F.3d 293, 296-98 (8th Cir. 1996); Cummins v. Lyle Indus., 93 F.3d 362, 368-69 (7th Cir. 1996). Hands-on testing, of course, is not an absolute prerequisite to the admissibility of expert testimony. Cummins, 93 F.3d at 369. An engineer expert could establish the reliability of his

proposed design changes, for example, "through the review of experimental, statistical, or other scientific data generated by others in the field." Id. We need not decide here the scope of any testing requirements. It is sufficient to say that in the absence of some indicia of reliability of the expert's proposed designs, exclusion of expert testimony is appropriate.

As noted, most of the proposed design modifications discussed by Purswell and Kennedy lacked an adequate foundation of reliability. Simply throwing out a concept and suggesting it may be feasible is an insufficient basis "for relaxing the usual first-hand knowledge requirement of the Federal Rules of Evidence on the ground that the expert's opinion has a reliable basis in knowledge and experience of his discipline." Id. Nevertheless, Purswell and Kennedy also recommended guards/shielding which previously have been demonstrated feasible on the John Deere 510 and Vermeer 504-C closed throat balers, both of which were in use years before the Gehl 1870 baler first hit the market. Purswell and Kennedy further testified that the use of such guards/shielding could have prevented or, at a minimum, greatly reduced the severity of Kinser's injuries. Although federal law governs this admissibility issue, it is guided in part by the substantive state law. Under Kansas law, "[o]ne of the most significant factors in [determining whether a manufacturer has exercised due care in the design of its product] is whether others in the field are using the same design, or a safer design." Garst ,

484 P.2d at 61. Accordingly, while we believe much of the expert testimony rendered by Purswell and Kennedy should have been excluded under a Daubert analysis, we conclude any error ultimately was harmless and a new trial is thus unwarranted.

2. Duty to Test Instruction

Gehl claims the district court erred in submitting a failure to test instruction to the jury. Gehl argues there was no evidence in the record as to what testing should have been done or what testing would have revealed. In a diversity case, the substance of a jury instruction is a matter of state law, but the grant or denial of a tendered instruction is a procedural matter governed by federal law. Wolfgang , 111 F.3d at 1525. When a party objects to instructions given at trial, we conduct "a de novo review to determine whether, as a whole, the instructions correctly stated the governing law and provided the jury with an ample understanding of the issues and applicable standards." Advantor Capital Corp. v. Yeary , 136 F.3d 1259, 1265 (10 th Cir. 1998) (internal quotation omitted). Assuming the instruction properly sets forth the relevant law, we review the district court's decision to give the particular instruction for an abuse of discretion. Allen v. Minnstar, Inc. , 97 F.3d 1365, 1368 (10 th Cir. 1996).

The Kansas Supreme Court has described a manufacturer's duty to test as follows:

> The rule is that a manufacturer has a duty to make such tests and inspections, during and after the process of manufacture, as should be recognized as being reasonably necessary to secure the production of a safe product; and a manufacturer who negligently fails to use reasonable care in making such tests and inspections, and thereby produces a defective article which causes damage while being put to an ordinary anticipated use, is liable for such damage.

Lindquist v. Ayerst Labs., Inc., 607 P.2d 1339, 1350 (Kan. 1980) (quotation omitted). We conclude the record justifies the issuance of a duty to warn instruction. Plaintiff advanced sufficient evidence suggesting that, if Gehl had evaluated the efficacy of warnings on its 1870 baler or examined closed-throat baler feed intake entanglement injuries in the industry, the company would have learned of the excessive dangers posed by the 1870 baler's design and the availability of ameliorative devices. In addition, plaintiff adduced testimony from Gehl's own current and former employees regarding the inadequacy of the company's product safety reviews, offering insight to jurors on why Gehl may not have identified defects in proposed and/or current product designs.

3. Evidence of Previous Accidents

Gehl maintains the district court improperly admitted evidence of a prior closed-throat baler entanglement injury for the purpose of showing the company had notice of defects in the 1870 baler. Specifically, Gehl claims it was error to admit evidence on the injuries suffered by the plaintiff in the *Birchler* case. We review the district court's evidentiary rulings for an abuse of discretion. Pandit v.

American Honda Motor Co., 82 F.3d 376, 379 (10th Cir. 1996). Under this standard, "a trial court's decision will not be disturbed unless the appellate court has a definite and firm conviction that the lower court made a clear error of judgment or exceeded the bounds of permissible choice in the circumstances." Id. (citation omitted).

Both federal and Kansas law permit the introduction of similar accidents in product liability actions to prove "notice, the existence of a defect, or to refute testimony given by a defense witness that a given product was designed without safety hazards." Ponder v. Warren Tool Corp., 834 F.2d 1553, 1560 (10th Cir. 1987); see Powers v. Kansas Power & Light Co., 671 P.2d 491, 499 (Kan. 1983) ("Evidence of prior similar accidents is admissible to prove foreseeability."). As a prerequisite to admitting such evidence, the proponent must demonstrate "the circumstances surrounding the other accidents were substantially similar to the accident involved in the present case." Wheeler v. John Deere Co., 862 F.2d 1404, 1407 (10th Cir. 1988) (citations omitted). The requisite degree of substantial similarity is tied to the proponent's theory of proof:

> If dangerousness is the issue, a high degree of similarity will be essential. . . . If the accident is offered to prove notice, a lack of exact similarity of conditions will not cause exclusion provided the accident was of a kind which should have served to warn the defendant. . . . Once a court has determined that accidents are substantially similar, any differences in the circumstances surrounding those occurrences go merely to the weight to be given the evidence.

Ponder , 834 F.2d at 1560 (citations omitted) (first alteration in original).

The accident culminating in the *Birchler* lawsuit involved an individual who became entangled in the feed intake area of a Gehl model 1500-A closed-throat baler. According to Kennedy, the *Birchler* plaintiff went into the machine following the same path as Kinser. Although Gehl emphasizes that the 1500-A baler in *Birchler* is different than the 1870 baler at issue in the instant action, the difference is largely immaterial inasmuch as there is abundant testimony that the feed intake areas on the two models are virtually identical.

Noting that the accident in *Birchler* pre-dated Kinser's purchase of his 1870 baler, Gehl also insists it could not have been put on notice of any defects in its 1870 baler as a result of the *Birchler* accident. We have held before that a substantially similar prior accident may be used to establish notice only if it occurred sufficiently prior to the date of the subject incident that defendant could have taken steps to remedy the situation. Julander v. Ford Motor Co. , 488 F.2d 839, 846 (10 th Cir. 1973). It is undisputed here that Gehl did not receive notice of the injuries in the *Birchler* accident, which occurred in August 1990, until August 1991. Kinser's 1870 baler was manufactured in January 1991 and sold to him in April 1991. Gehl is thus correct that the *Birchler* incident itself would not have

put the company on notice of a defect in Kinser's specific baler.[6]

Any error the district court may have committed by admitting testimony on the *Birchler* incident was harmless. Plaintiff offered evidence of another similar accident—an entanglement injury in a closed-throat baler's feed intake area—in the *Neill* case that took place nearly a decade before Kinser's injury. *Birchler*, therefore, did not represent Gehl's first notice of potential deficiencies with the feed intake area design of closed-throat balers. Gehl does not object to the introduction of testimony on *Neill*. Moreover, the court invited Gehl to mitigate the effect of this evidence by having Gehl executives testify that nothing about the *Birchler* accident, including the verdict, compelled the company to alter the design of its closed-throat balers. Gehl did not avail itself of this opportunity. Accordingly, the company is in no position to complain about the error on appeal.

4. FIEI Documents

Gehl maintains the court erred in allowing plaintiff to elicit testimony on and reference various documents purportedly issued by the FIEI. We discern no abuse of discretion in the court's rulings. None of these documents were admitted into evidence. The materials simply were used by plaintiff's expert witnesses as a

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[6]Plaintiff's suggestion that Gehl's August 1991 notice of the *Birchler* incident should have triggered a post-sale duty to warn must be rejected. At no time in the district court did plaintiff raise a duty to warn claim. We will not entertain issues raised for the first time on appeal. Walker v. Mather (In re Walker), 959 F.2d 894, 896 (10th Cir. 1992).

partial basis upon which to assess Gehl's knowledge of closed-throat baler hazards and exercise of due care (or lack thereof) in product design. Federal Rule of Evidence 703 provides:

> The facts or data in the particular case upon which an expert bases an opinion or inference may be those perceived by or made known to the expert at or before the hearing. If of a type reasonably relied upon by experts in the particular field in forming opinions or inferences upon the subject, the facts or data need not be admissible in evidence.

Gehl has been a member of the FIEI (now named the Equipment Manufacturers' Institute) since the time of its formation in the 1970s. Burrough, who served as a member of the FIEI's Big Round Baler Committee, testified that the organization discussed closed-throat baler hazards and entanglement injuries in its meetings. The minutes of these meetings and correspondence between committee members are easily characterized as proper bases upon which an expert witness may rely for opinions regarding a manufacturer's knowledge of possible hazards and/or design defects. See Nanda v. Ford Motor Co. , 509 F.2d 213, 222 (7th Cir. 1974) (citations omitted) ("Facts or data found in the literature of the profession, even though not themselves admissible in evidence, properly form a part of the basis for an expert's opinion.").

Gehl attacks the reliability of these materials by underscoring the paucity of evidence in the record authenticating the documents. Rule 703, however, permits expert witnesses to base their opinions on evidence that is inadmissible under the

hearsay, authentication, and best evidence rules. 29 Charles A. Wright and Victor J. Gold, Federal Practice and Procedure § 6273, at 311 (1997). "The rationale for this aspect of Rule 703 is that experts in the field can be presumed to know what evidence is sufficiently trustworthy and probative to merit reliance." Id. Although the district court could have precluded the reference to these documents, it did not abuse in discretion in refusing to do so.

5. Burrough Deposition Excerpts

Gehl's final argument is that the deposition excerpts of Burrough read to the jury constitute inadmissible hearsay. Plaintiff read excerpts of Burrough's depositions from three previous product liability lawsuits involving big round baler injuries: *Birchler* (1993 deposition), *Neill* (1991 deposition), and *Dunnahoe* (1985 deposition). Gehl grounds its challenge to this testimony on Fed. R. Evid. 801(d)(2). This rule provides, in relevant part, that a statement is not hearsay if—

> [t]he statement is offered against a party and is (A) the party's own statement, in either an individual or a representative capacity or (B) a statement of which the party has manifested an adoption or belief in its truth, or (C) a statement by a person authorized by that party to make a statement concerning the subject, or (D) a statement by the party's agent or servant concerning a matter within the scope of agency or employment made during the existence of the relationship. . . . The contents of the statement shall be considered but are not alone sufficient to establish the declarant's authority under subdivision (C) [or] the agency or employment relationship and scope thereof under subdivision (D).

Although Burrough had retired at the time of these depositions, he

continued to perform consulting services for Gehl on projects he had overseen during his full-time tenure with the company. Moreover, prior to being deposed in this case, current project engineer Viesselmann met with Burrough to review the former structure of Gehl's engineering department and the evolution of Gehl's closed-throat balers' designs. The preceding facts, both of which were established through Viesselmann's testimony, constitute independent and sufficient corroboration of Burrough's authority to make statements on behalf of Gehl and/or the scope of Burrough's employment. Because the topics discussed in Burrough's deposition excerpts all concerned events and policies occurring during his employment, the district court did not err in admitting this testimony pursuant to Rule 801(d)(2).

IV.

The judgment of the district court is AFFIRMED.